REMARKS

In response to the Office Action dated August 18, 2004, Applicants respectfully request reconsideration and withdrawal of the rejection of the claims.

In response to the objections set forth in sections 1 and 2 of the Office Action, the specification has been amended to insert the serial number of the referenced application, and claims 1 and 11 have been amended as suggested. The Examiner's identification of these items is noted with appreciation.

All pending claims were rejected under 35 U.S.C. § 103, as allegedly being unpatentable over the Zager patent (US 6,393,386) in view of the Bhaskaran patent (US6,266,335). While the Zager patent describes a model of a network, it is respectfully submitted that it does not disclose, nor otherwise suggest, a model of the type recited in the pending claims. Consequently, it does not suggest the claimed subject matter to a person of ordinary skill in the art, whether considered by itself or in view of the Bhaskaran patent.

As set forth in the background portion of the specification, the present invention is directed to the provisioning of servers and other devices that support sites on a network. To facilitate automated provisioning of such devices, the present invention provides a data model that characterizes the salient features the network. Thus, for example, once the operating parameters of a server have been appropriately configured to provide the desired level of service, information pertaining to the software packages and the operating parameter settings is stored in the data model. Thereafter, when the network site is to be scaled up, by installing additional servers, the information stored in the data model can be used to rapidly and automatically configure the additional servers, without the need for human input.

The Zager patent is not directed to the same objective as the present invention. Rather than the automated provisioning of devices on a network, the Zager patent is concerned with identification of the systematic impact of a problem in a network. See, generally, the discussion beginning at column 2, line 11 and particularly the sentence bridging columns 2 and 3 of the patent. In other words, once a problem is discovered on the network, the system of the Zager patent tries to identify how that problem will impact various parts of the network, so as to guide problem resolution efforts.

Consistent with this purpose, the model disclosed in the Zager patent provides a service-oriented view of the network, to be able to simulate the evolution of faults and performance degradations throughout the network. As stated at column 6, lines 25-27, the model "represents the various components, relevant subcomponents, and their service relationships to each other." With this information, predictions can be made about the manner in which a fault at a given point in the network will affect other components of the network.

Because the Zager patent is directed to a different objective, it does not store the same information in its data model as the present invention. For instance, as described previously, a significant aspect of the automated provisioning of servers is the configuration of the operating parameters for the hardware, software, and network components of the server. It is not enough to simply load software onto a server, and then expect it to run properly. Rather, a variety of different operating parameters, e.g. I/O ports, network addresses, memory settings, and the like, may need to be adjusted to achieve optimum performance. For this reason, the data model of the present invention includes a plurality of configuration entities containing information regarding the settings for the software

components, hardware devices and other network components. There is no need to store this kind of configuration information in the data model of the Zager patent, since such details are not relevant to the types of predictions that the data model is designed to facilitate. In this regard, it is to be noted that the patent explicitly states that "the model itself does not contain all available information about the nature of each component..." (Column 6, lines 27-30.)

Claim 1 recites a configuration data model that comprises device role IP host entities, virtual IPs entities, status entities and device entities. In rejecting this claim, the Office Action contends that the network model disclosed in the Zager patent includes IPs entities that represent IP addresses associated with devices on a network, with reference to column 10, lines 23-50 and column 22, lines 50-61. The Office Action acknowledges that the Zager patent does not disclose virtual IP entities, and relies upon the Bhaskaran patent as teaching the desirability of including virtual IPs entities in the network model of the Zagar patent. However, it is respectfully submitted that it would not be obvious to combine the teachings of these two patents.

First, the two patents are directed to totally diverse objectives. As noted above, the Zager patent is concerned with the identification of the systematic impact of a problem in a network. In contrast, the Bhaskaran patent is directed to the design of a particular component of a network, namely a network flow switch that connects a pool of IP routers to a cluster of IP servers that share a single IP address. Thus, the Zagar patent is concerned with the ability to monitor activities on the network and predict their effects, whereas the Bhaskaran patent is concerned with the construction of a particular type of device on the network. The two patents have nothing to with one another, and there is no

apparent reason why a person who is concerned with network monitoring would have any motivation to refer to the teachings of the Bhaskaran patent.

Furthermore, even if a person were aware of the teachings of the two patents, it would not be obvious to incorporate virtual IP addresses into the data model of the Zager patent. Consistent with the objective of that patent, it is only necessary for the model to store that information which is necessary to understand the service relationships of network components. For instance, the model only needs to identify the fact that router A is connected to server B, so that the effects of a fault at router A can be determined for server B. Whether this connection is carried out by a virtual IP address or a physical IP address is irrelevant to this determination. Consistent with the stated objective of simplifying the data model, as noted previously in connection with column 6, lines 27-30, it would be inconsistent to store specific IP address information as part of the model. Absent knowledge of the present invention, there is no reason to store any information in the data model of the Zager patent other than that which is explicitly disclosed for the purpose of determining fault evolution. Bhaskaran's disclosure of virtual IP addresses have no relationship to the data model of the Zager patent.

Because of the different objectives of the Zager patent and the present invention, other features recited in the claims are likewise not disclosed, nor otherwise suggested, by the patent. For example, claim 9 recites that the data model includes, among other elements, a plurality of conduits entities. In rejecting this claim, the Office Action refers to the Zager patent at column 6, lines 17-18, which refers to a hub and a router. However, this disclosure, by itself, does not suggest the conduit entities are incorporated into the data model. In the data model of the Zager patent, it is pertinent to know that a router or a hub

exists in the network, as well as the devices to which it is connected. However, whether that connection is effected by means of a particular conduit in a firewall, or some other type of connection, is not critical to the fault evaluation process. The fact that the Zager patent discloses the identification of hubs and routers does not inherently mean that conduit entities form part of its data model.

Other elements of the data model recited in claim 9 include role configurations entities, device role configuration entities, and device role configuration values entities. The Office Action notes that the Zager patent discloses that the physical devices provide services (which the Action appears to interpret as roles), and have different configurations. However, the patent does not go so far as to suggest that the configurations themselves, or more particularly that values pertaining to the configurations, are stored as entities in the data model. In fact, this difference highlights one of the fundamental distinctions between the present invention and the system of the Zager patent. Since the Zager patent is concerned with a network monitoring system, its data model represents directed linkages between objects that represent the direction of error, or fault propagation. For example, a router has an arrow to each server that it services, so that if the router goes down it is then possible to determine each server that will be affected. In contrast, the present invention is focused upon automated server configuration, and therefore its model is server configuration centric. The kind of information that is stored, therefore, will be different. For example, if a device is to be configured as a database server, one of the configuration parameters might be the maximum shared memory support that is provided by the operating system kernel. While this type of configuration information is important in an automated server provisioning system, it is not required to be modeled in a monitoring system, of the

type described by the Zager patent. In fact, there is no apparent reason for storing any type of configuration information, or configuration values, in the data model of the Zager patent.

For at least these reasons, therefore, it is respectfully submitted that the claimed subject matter is not suggested by the Zager patent, whether considered by itself or in combination with the Bhaskaran patent. Reconsideration and withdrawal of the rejection is therefore respectfully requested.

Respectfully submitted,

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Date: February 18, 2005

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